101. Papilio agamemnon.

Papilio ægistus, Cramer, Pap. Exot. ii. pl. 106. figs. C, D (1779) "Woodlark Island" (Montrouzier).

I suspect that Montrouzier's insect is a distinct species.

Family HESPERIIDÆ.

Genus Hesperia, Fabricius.

102. HESPERIA EXCLAMATIONIS.

Papilio (P. U.) exclamationis, Fabricius, Syst. Ent. p. 530. n. 373 (1775).

Hesperia exclamationis, Butler, Cat. Diurn. Lep. Fabr. p. 269.

n. 1, pl. 3. fig. 2 (1869).

Aneiteum (Cuming).

B.M.

103. HESPERIA DIRPHA.

Thymele dirpha, Boisduval, Voy. de l'Astrolabe, Lép. p. 162. n. 8 (1832).

New Ireland (Boisduval).

Genus Pamphila, Fabricius.

104. PAMPHILA ANGUSTULA.

Pamphila angustula, Herrich-Schaffer, Stett. ent. Zeit. p. 79. n. 19 (1869).

Vanua Valava (Herrich-Schäffer).

In the 5th Catalogue of the Museum Godeffroy, pp. 58, 59, Pieris (Belenois) teutonia is reported as occurring in Viti Island, Pieris (Appias) ada in the island of Yap, Pelew Islands, and Callidryas (Catopsilia) minna in Ovalau. I suspect the first of these three to be B. peristhene, and the third C. lactea; "A. ada" of the list is probably distinct from the typical form, which we have only from Aru.

In my list of the Lepidoptera collected in the South-Sea Islands by Mr. Brenchley, I have included Acræa andromacha; I think it likely, however, that the single example in the collection was taken

on the Australian coast.

EXPLANATION OF PLATE XLIV.

Fig. 1. Euplwa perryi, p. 278. 2. Diadema pulehra, p. 281. 3. Diadema lutescens, p. 283.

5. Remarks on the Grey-capped Gulls and on the Species with which they have been confounded. By Howard Saunders, F.Z.S.

[Received March 31, 1874.]

In anticipation of a Monograph of the Laridæ, upon which I have for some time been engaged, I offer a few remarks with the object of clearing up the confusion which exists respecting the

Grey-capped Gulls for which Bonaparte formed the subgenus Cir-

rhocephalus (Naumannia, 1854, Heft iv. p. 213).

There are two closely allied species, which during the breeding-season, and, as I believe, throughout a considerable portion of the year, bear a hood of a pale French grey, slightly darker at the margins, round the nape and throat, viz.:—

LARUS PHÆOCEPHALUS, Sw. B. W. Afr. ii. p. 245, pl. 29 (originally written *L. poiocephalus*), a native of West Africa and the interior up to Lake Ngami; and

LARUS CIRRHOCEPHALUS, Vieillot, N. D. xxi. p. 500; Gal. Ois. ii. p. 223, pl. 289; the *Gaviota cenicienta* of Azara, found in Brazil and the States of La Plata.

In their general appearance these Gulls closely resemble each other; and both Blasius and Schlegel have considered them to be identical—an opinion the value of which is somewhat impaired by the fact of their having confounded one or both of these species with others from which they are most certainly distinct. This has doubtless arisen from the want of a sufficient series in which the localities have been duly recorded; for specimens of the birds in question, and of those with which they have been confounded, are extremely rare in collections; and it is only recently that I have been able to obtain such a series as would justify my speaking with some confidence on the subject.

First, as regards the distinctness of the African and the American

forms, I have before me the following specimens:-

LARUS PHÆOCEPHALUS.

Senegambia, Swainson's coll., Cambridge Mus. Believed to be the type: ad.

Walvisch Bay (Andersson), probably in October. Ad.; full hood. Lake Ngami (Chapman, May 1863). Hood slightly imperfect. Wing 12.5, tar. 1.8-2, middle toe and nail 1.7, bill 1.4. Colour of legs and bill orange-red.

LARUS CIRRHOCEPHALUS.

Buenos Ayres, & & Q ad., several specimens, those killed in April and November having the grey cap equally defined; also immature specimens obtained in April, and in which the grey hood is appearing, although the dark bar to the tail and the brown feathers on the shoulders still remain.

Q. Chorillos, near Lima, lat. 12° 10′ S.; the first recorded instance of its occurrence on the Pacific coast. This was shot by a friend

resident at Lima, whom I had asked to collect Gulls &c.

Wing 13-13.5, tar. 2.2-2.4, middle toe and nail 2, bill 6.1. Bill legs, and feet lake-red; in a very old male of the brightest crimson.

The same description would apply to either: the hood pale grey with a dark margin; the wings and mantle rather darker than the

hood, but much lighter than the under wing-coverts, which are of a deep smoke-grey; underparts and tail pure white. But it will be observed that there is a considerable difference both in the size and in the coloration of the soft parts of the two species; and this is much more noticeable on handling the different specimens than can be gathered from any mere description. It must be admitted that Swainson in his original description states that the bill and feet of the African bird are "deep crimson;" but, with every allowance for fading, I cannot imagine the colour in those I have examined to have ever been more than "orange-red," very different from the livid red or brilliant lake-colour of the American specimens. course I am now alluding to adults only; but, as regards size, a glance at the coarser and stronger feet even in the immature American birds would enable me to distinguish them from the African form. Without, however, insisting too strongly upon the value of these differences, I consider that the two forms are at least as much entitled to specific distinction as L. glaucus and L. leucopterus, or L. marinus and L. fuscus, to say nothing of the species which surround L. argentatus. This conclusion is in no way influenced by the fact of the two species being found in different continents; for I am at the present moment unable to separate the Saddle-backed Gulls which, under the titles of L. dominicanus, vetula, and antipodum, with other synonyms, inhabit both the Atlantic and Pacific coasts of South America, the south coast of Africa, New Zealand, and many of the intervening islands. It would seem that these Grey-capped Gulls are representative species on either side of the South Atlantic, in the same way that L. heermanni on the west coast of America replaces L. crassirostris, Vieill. (L. melanurus, Temm.), in the Japan and China seas—not to quote other instances which are not quite so evident.

But the question of the distinctness of these two forms is a mere trifle to the maze of confusion in which both these and two totally different species have been involved, and which I will do my best to unravel. To do this it will be better to take them separately.

L. phæocephalus is identified by Bruch (J. f. O. 1855, p. 290) with L. ridibundus; but he could never have seen a true specimen. Finsch and Hartlaub (Vög. Ost.-Afr. p. 825) describe the real bird from Bissao with a grey head, but are probably wrong as regards the specimen with a white head from the Cape of Good Hope, received through Verreaux. Blasius again (J. f. O. 1865, p. 376) may possibly have had a specimen of the Grey-capped Gull in immature plumage before him; but he goes on to confound it with L. hartlaubi, Bruch, a species which that author places in his genus Gavia, close to Gelastes. This latter species has a certain superficial resemblance to the former, and it also has the under wing-coverts of a smoke-grey; but it is altogether a smaller bird than L. phæocephalus, the wing being only 11 inches and the tarsus 1.7 in length; besides which, it never has a hood. It is a coast resident, and breeds near the Cape of Good Hope; it is, in fact, a member of the same group as L. scopulinus, Forst., of New Zealand, L. novæ hollandiæ, L. jamesoni, and perhaps L. pomare, into whose specific distinctness it is not my present intention to enter. Another point which distinguishes it from L. phæocephalus exists in the seventh primary, which has a broad dusky bar right across it and is altogether darker in the grey-capped bird, whilst in L. hartlaubi it is uniform grey, just fringed with smoke-colour on the inner web; the colour of the legs and bill is also deep lake-red. Blasius says (loc. cit.) that, as a rule, L. phæocephalus, Sw., figures as L. hartlaubi in collections; but according to my experience the reverse is the case; and, with one solitary exception in the British Museum, all the specimens which I have examined marked "L. phæocephalus" are really L. hartlaubi. Layard (B. S. A. p. 368) has also confounded these two

species, having obtained both.

When we turn to L. cirrhocephalus of South America we find a different element of confusion, owing to the presence there of a species which certainly has a hood, although in this case it is a brown one, similar to that of our European L. ridibundus. Prince Max. v. Wied first noticed its occurrence amongst the grey-capped species (Beit. iv. p. 854), and was inclined to refer it to L. ridibundus; but it is undoubtedly L. glaucodes, Meyen, Obs. Zool. p. 115-L. albipennis, Licht., Gavia roseiventris, Gould (I only give the principal synonyms)—a species which ranges from the south of Brazil down to the Falkland Islands, throughout Patagonia, and for some distance up the coast of Chili. This is the species of whose breeding near Buenos Ayres Mr. W. H. Hudson (P. Z. S. 1871, p. 4) has given an interesting account; but although he distinctly calls it (P. Z. S. 1870, p. 802, and 1871, p. 258) the black-headed gull, the very name we apply to our L. ridibundus, yet he identifies it with L. cirrhocephalus, whose head, as I have repeatedly remarked, is of a pale grey, and nothing approaching either to black or brown. Excepting that to a casual observer all Gulls of nearly the same size are much alike, it is difficult to understand how the two species can have been confounded even in immature plumage; for the smoke-colour of the under wingcoverts so noticeable in L. cirrhocephalus is entirely absent in L. glaucodes, to say nothing of the markings of the primaries, which differ even in very young birds. That L. glaucodes itself should have been subdivided is not at all surprising; for it requires a large series to show how the primaries, which in the early stages have merely a patch of white near the apex, gradually become barred with black and white (in which stage the brown head of maturity is assumed) and gradually lose all but a streak of black on the outside of the inner web, so that the principal primaries appear to be entirely white. L. maculipennis of Burmeister, however, is L. cirrhocephalus.

The sum of my observations is briefly this—that L. phæocephulus, Sw., and L. cirrhocephalus, V., are fairly separable, that L. phæocephalus is totally distinct from L. hartlaubi, Bruch, which never has a hood of any colour whatever, and that L. cirrhocephalus has been unnecessarily confounded with L. glaucodes. My warmest

